

## Claims

- 5 1. In a communications network comprising a plurality of network elements, a method of providing management data describing synchronisation trail information for said network elements, said method comprising the steps of:
- obtaining network element synchronisation data;
  - obtaining network element connectivity data;
  - deriving synchronisation trail information for said network elements from said synchronisation data and said connectivity data.
- 10 2. A data representation of a physical resource operating in accordance with a protocol having a plurality of layers, the representation further comprising a timing layer representing synchronisation trail information.
- 15 3. In a communications network comprising a plurality of network elements, said network elements comprising a plurality of physical resources organised into a plurality of types of pre-configured structures, a method of providing management data describing synchronisation trail information of said network elements, comprising the steps of:
- 20 representing said plurality of physical resources by a plurality of reference data; and representing synchronisation trails within said network by a plurality of synchronisation reference data.
- 25 4. A management system of managing synchronisation for a network comprising a plurality of physical resources, said system comprising:
- data storage means for storing;
  - reference data representing connectivity between said resources;
  - and synchronisation reference data representing synchronisation trails to each resource.
- 30 5. A method of exploring synchronisation trails within a network comprising a plurality of network elements, the method comprising the steps of:
- obtaining network element synchronisation data;
  - obtaining network element connectivity data;
  - deriving synchronisation trail information from a network element and following the trail to the synchronisation source of the element, using said synchronisation data and said connectivity data.
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~~deriving synchronisation trail information for said network elements from said synchronisation data and said connectivity data;~~

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